REMARKS

Reconsideration of this application is respectfully requested. Claims 70, 72, 76-79, 82, 85, and 90-93 have been amended. The amendments are fully supported by the specification, for example, on page 10, lines 16-24. The amendment adds no new matter. Claims 70-95 are pending in this application.

Rejections under 35 USC § 102(b)

Claims 82 and 83 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by McCabe et al. The Examiner contends that the active steps of McCabe et al. are the same as those of claims 82 and 83 and would be expected to generate a virus with the same mutations. Applicant traverses the rejection.

In claims 82 and 83, an attenuated myxomavirus that induces paramunity is generated, which has lost the receptor properties of one or more myxomavirus interferon receptor, one or more myxomavirus tumor necrosis factor receptor, and one or more myxomavirus interleukin receptor is generated. There is no indication that McCabe et al. selected a virus with these properties. In fact, there is no mention of a virus with these properties in McCabe et al. Therefore, McCabe et al. cannot anticipate Applicant's invention.

Moreover, to highlight the differences between Applicant's invention and McCabe et al., Applicant has amended claim 82 to recite a step of "selecting an attenuated myxomavirus that induces paramunity and has lost the receptor properties of one or more myxomavirus interferon receptor, one or more myxomavirus tumor necrosis factor receptor, and one or more myxomavirus interleukin receptor." McCabe et al. does not

teach such a selection step. Accordingly, Applicant submits that McCabe et al. cannot anticipate claims 82 and 83, and respectfully requests withdrawal of the rejection.

Claims 82-84 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Saito et al. The Examiner contends that the active steps of Saito et al. are the same as those of claims 82 and 83 and would be expected to generate a virus with the same mutations. Applicant traverses the rejection.

In claims 82-84, an attenuated myxomavirus that induces paramunity is generated, which has lost the receptor properties of one or more myxomavirus interferon receptor, one or more myxomavirus tumor necrosis factor receptor, and one or more myxomavirus interleukin receptor is generated. There is no indication that Saito et al. selected a virus with these properties. In fact, there is no mention of a virus with these properties in Saito et al. Therefore, Saito et al. cannot anticipate Applicant's invention.

Moreover, to highlight the differences between Applicant's invention and Saito et al., Applicant has amended claim 82 to recite a step of "selecting an attenuated myxomavirus that induces paramunity and has lost the receptor properties of one or more myxomavirus interferon receptor, one or more myxomavirus tumor necrosis factor receptor, and one or more myxomavirus interleukin receptor." Saito et al. does not teach such a selection step. Accordingly, Applicant submits that Saito et al. cannot anticipate claims 82-84, and respectfully requests withdrawal of the rejection.

Rejections under 35 USC § 103(a)

Claims 70-75, 80, 81, 85-88, 94, and 95 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mayr (US2003/0013190 A1) in view of Saito et al.

and Paoletti (U.S. Patent 6,340,462). The Examiner contends that it would have been obvious to modify the methods taught by Mayr in order to attenuate myxoma virus in Vero cells. Applicant traverses the rejection.

Contrary to the assertion of the Examiner, Mayr does not provide any motivation to grow myxoma virus in Vero cells or any expectation of success. Rather Mayr teaches the growth of MVA, a modified vaccinia virus, in Vero cells. There is no indication in Mayr that myxoma virus can be grown and/or attenuated in Vero cells. In fact, Mayr does not even mention myxoma virus. Moreover, Saito et al. used a rabbit kidney cell line for growing myxoma virus, and not Vero cells. Thus, the Examiner's contention that it would have been obvious to modify the methods taught by Mayr in order to attenuate myxoma virus in Vero cells is unsupported. Accordingly, Applicant respectfully requests withdrawal of the rejection.

In addition, claims 70-75, 80 and 81 recite "passaging the adapted virus in a binary cell culture obtained by cell fusion of two cell types." The passaging of a myxomavirus in a binary cell culture is not disclosed in Mayr, Saito et al., or Paoletti. Accordingly, Applicant submits that Mayr in view of Saito et al. and Paoletti cannot make claims 70-75, 80 and 81 obvious, and respectfully requests withdrawal of the rejection.

Claims 70-75, 80, and 81 also recite a step of "selecting an attenuated myxomavirus that induces paramunity." Neither Mayr, Saito et al., nor Paoletti teaches or suggests such a selection. For this additional reason, Applicant submits that Mayr in view of Saito et al. and Paoletti cannot make claims 70-75, 80, and 81 obvious, and respectfully requests withdrawal of the rejection.

Similarly, claims 85-88, 94, and 95 recite a step of "selecting an attenuated myxomavirus that induces paramunity and has lost the receptor properties of one or more myxomavirus interferon receptor, one or more myxomavirus tumor necrosis factor receptor, and one or more myxomavirus interleukin receptor." Neither Mayr, Saito et al., nor Paoletti teaches or suggests such a selection. Accordingly, Applicant submits that Mayr in view of Saito et al. and Paoletti cannot make claims 85-88, 94, and 95 obvious, and respectfully requests withdrawal of the rejection.

Claims 70-75, 80-89, 94, and 95 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mayr (US2003/0013190 A1) in view of Saito et al., Paoletti (U.S. Patent 6,340,462), and Ogino et al. (Journal of Virology, 2004). The Examiner concedes that Mayr, Saito et al., and Paoletti do not teach passaging myxoma viruses in cells that are fused. However, the Examiner contends that Ogino et al. teaches the pasaging of Hantaan virus in Vero E6 cells that fuse with infected and uninfected cells. The Examiner concludes that it would have been obvious to attenuate myxoma virus in Vero cells or cells fused with other cells since Ogino et al. teaches that viruses can be cultured in Vero cells that fuse with other cells.

Applicant traverses the rejection. Ogino et al. does not teach or suggest that myxoma viruses can be passaged in Vero cells fused with other cells. Rather, Ogino et al. teaches that Hataan viruses can be grown in Vero E6 cells. Hataan virus is a Bunyavirus, not a poxvirus. (Ogino et al. at 10776, col. 1, first ¶.) Thus, Ogino et al. provides no information whatsoever as to the ability of myxoma viruses to be passaged in Vero cells fused with other cells.

Moreover, Ogino et al. did not passage any virus in a binary cell culture obtained by cell fusion of two cell types. (*Id.*, col. 2, "Cells and virus".) Rather, Ogino et al. performed a fusion assay on infected Vero E6 cells, a single cell type. (*Id.* at 10776-10777, bridging ¶.) Although infected Vero E6 cells may have fused with uninfected Vero E6 cells during the assay, no other cell type beyond Vero E6 was used. Thus, Ogino et al. never passaged any virus in a binary cell culture, as recited in claims 70-75, 80-89, 94, and 95. Since none of the references cited by the Examiner teach or suggest passaging myxoma virus in a binary cell culture, claims 70-75, 80-89, 94, and 95 cannot be obvious over the cited references. Accordingly, Applicant respectfully requests withdrawal of the rejection.

In addition, claims 70-75, 80, and 81 also recite a step of "selecting an attenuated myxomavirus that induces paramunity." Neither Mayr, Saito et al., Paoletti, nor Ogino et al. teaches or suggests such a selection. For this additional reason, Applicant submits that Mayr in view of Saito et al. and Paoletti cannot make claims 70-75, 80, and 81 obvious, and respectfully requests withdrawal of the rejection.

Similarly, claims 82-89, 94, and 95 recite a step of "selecting an attenuated myxomavirus that induces paramunity and has lost the receptor properties of one or more myxomavirus interferon receptor, one or more myxomavirus tumor necrosis factor receptor, and one or more myxomavirus interleukin receptor." Neither Mayr, Saito et al., Paoletti, nor Ogino et al. teaches or suggests such a selection. Accordingly, Applicant submits that Mayr in view of Saito et al., Paoletti, and Ogino et al. cannot make claims 82-89, 94, and 95 obvious, and respectfully requests withdrawal of the rejection.

Rejections under 35 USC § 112, first paragraph

Claims 76-79 and 90-93 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. The Examiner contends that the AVIVER cells are required to practice the invention, and that the enablement requirement may be satisfied by a deposit of the AVIVER cells. Applicant traverses the rejection.

The specification teaches that AVIVER cells are "obtained by cell fusion between chick embryo fibroblasts (CEF) and Vero monkey kidney cells." (Specification at 8-9, bridging paragraph.) Both CEFs and Vero monkey kidney cells are readily available cell types and cell fusion techniques are widely known in the art. Thus, AVIVER cells are readily obtainable, and a deposit of the AVIVER cells of Applicant's claims is not required.

Nonetheless, Applicant has removed the recitation of "AVIVER" from claims 76-79 and 90-93. Accordingly, Applicant respectfully requests withdrawal of the rejection.

Rejections under 35 USC § 112, second paragraph

Claims 70-81 were rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. The Examiner contends that claim 70 refers to a binary cell culture, while dependent claim 72 refers to Vero monkey kidney cells. Applicant has amended claim 72 to recite that the method further comprises passaging the virus in Vero monkey kidney cells. Accordingly, Applicant respectfully requests withdrawal of the rejection.

Applicant respectfully submits that this application is in condition for allowance. Should the Examiner disagree, he is invited to contact the undersigned to discuss any outstanding issues.

Respectfully submitted,

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Dated: August 6, 2008

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